



California Electric and Magnetic Fields Program

NEWSLETTER MARCH, 1999

An Update on Program Activities

STAKEHOLDERS ADVISORY COMMITTEE MEETING UPDATES

On February 23 and 24, 1999, there was a Stakeholders Advisory Committee (SAC) meeting in the EMF Program offices in Oakland, California. Topics of discussion included the Occupational Exposure Survey, the Power Grid Policy Project, sensitivity analysis proposals for the School and Power Grid Policy Projects, the selection of a new member to the Science Advisory Panel, the approach for peer reviewing the cost estimates in the policy projects, and the role of the SAC in the EMF Program's non-policy projects. Stakeholders provided valuable suggestions to strengthen the Occupational Exposure Survey and Power Grid projects. Details of the meeting will be available in the meeting minutes, which will be distributed in a future mailing.

Telephone Participation in SAC Meetings

At this meeting, the core SAC made recommendations on ground rules for telephone participation in future meetings. The majority voted to allow members of the general public to participate in SAC meetings by telephone, either as listeners only or as full participants, though those who voted against allowing phone participation believed strongly that it is disruptive.

In accordance with the SAC vote, program staff have developed a policy on telephone participation. Core SAC members will be expected to attend meetings in person, but members of the public who cannot travel to the meeting (because of a disability that makes travel difficult, for example) can request a phone connection to enable them to participate. Such requests will be accommodated whenever possible, using standard telephone conferencing equipment. In most discussions, SAC core members and the general public will participate on an equal basis. As in the past, people present at the meeting will raise their nameplates when they wish to speak; the chair will call on people in the order they raised them. Telephone participants, who cannot communicate with the chair in another way, will

state politely that they wish to be added to the list of future speakers; they will be called on on the same basis as all others present. For votes of the core SAC and certain other limited situations, SAC core members will speak first, then members of the public (present in person or by telephone) will have an opportunity to speak before a vote is taken or a decision is reached. In these cases, at the beginning of the discussion the chair will announce that SAC core members will speak first.

These rules will govern telephone participation and the structure of discussions in future meetings. If telephone participation or other aspects of the ground rules become disruptive or impractical, program staff will re-evaluate these policies.

SAC Role with Regard to Peer Review

At the February SAC meeting, the EMF Program's position on the role of SAC members in peer reviewing various program projects was discussed. Program staff seek SAC input on policy projects, cost-related items, and some non-technical aspects of the Risk Evaluation Guidelines. The policy projects will be reviewed by qualified scientists selected by the program, as well as by SAC members, before they are finalized. At the suggestion of several SAC members, engineering experts Bill Feero and Fred Dietrich have been asked to join the review panel for the policy projects.

In accordance with California Department of Health Services policy, SAC members are not considered appropriate reviewers of early drafts of the technical aspects of the scientific research projects. Because of this, program staff encourage SAC members to suggest qualified peer reviewers for these projects. For example, the SAC had input into the selection of the Science Advisory Panel, which will review the risk evaluation projects, and the peer reviewers for the epidemiology and exposure studies.

New Member Named to Science Advisory Panel

At the request of the SAC, EMF staff presented and SAC members voted on three candidates to fill a pathologist/oncologist slot on the Science Advisory Panel. The SAC vote was split between two candidates, so EMF staff chose Jan Van Tornout, MD, MS, an Assistant Professor of Pediatric and Preventive Medicine at USC Children's Hospital, to fill the vacancy. Dr. Van Tornout is an oncologist with an interest in the genetics and mechanisms of cancer. His other qualifications include a Master's degree in statistics and familiarity with epidemiology. Program staff believe that this broad background should be valuable to the Panel. Dr. Van Tornout will receive the current draft of the Risk Evaluation Guidelines and the comments of the other panelists and stakeholders, so he can have the same information and input on the draft as other panel members.

Spring Workload for SAC Members

In the months of April and May, draft copies of several projects and reports will be distributed to the core SAC members. The software models for the School and Power Grid Policy Projects, as well as drafts of their accompanying narratives, are expected to be available for SAC review near the end of April. The revised draft of the Risk Evaluation Guidelines will be made available for their public comment period in April or May, and will be distributed for SAC review at that time. SAC members who wish to review all of these projects should be aware of the heavy workload this will require in the late spring, and if possible, should plan to allow time in this period to complete the work. EMF Program staff will make sure that SAC members have one to two months to review these projects.

CPUC Annual Report

EMF Program staff are preparing a report to the California Public Utilities Commission on the EMF Program's progress. The report will include summaries of SAC activities since the last report, the Program's current budget and budgetary projections, and progress reports on the various research projects and the Program's other achievements. The EMF Program had hoped to make the report available in March, but because of the many projects reaching key milestones over the next few months, it was decided that it would be more valuable to issue this report in July. By then, the policy project drafts will be available and staff will have a clearer idea of the status of the Risk

Evaluation Guidelines and the risk evaluation itself. As usual, staff will share the draft report with the SAC for their comments.

EMF Staff Goals for March and April

- finish Risk Evaluation Guidelines
- finish Proceedings and staff articles of Epidemiology Workshop
- set up Cost and Engineering Review of Energetech and Decision Insights projects
- begin work on review of biophysical mechanisms and mechanistic studies with Dr. Paul Gailey

R E S E A R C H P R O J E C T S

Science Advisory Panel Feedback on Risk Evaluation Guidelines

The EMF Program's Science Advisory Panel held its first meeting on February 22, 1999. The meeting focused on the draft Risk Evaluation Guidelines that Panel and core SAC members reviewed in January. The panel's discussion and suggestions were constructive, and seemed generally supportive of the risk evaluation process outlined in the guidelines. The comments provided at the meeting will help the guidelines' authors improve the final document.

The panel had suggestions for clarifying some terminology used in the guidelines, explaining the rationale for assigning relative weights to the various streams of evidence that will be examined in the evaluation, and making the evaluators' assumptions about dose response, exposure, and population burden more explicit. EMF Program staff are currently going over the written responses and verbal discussion from panel and SAC members, and have begun writing a second draft. This draft must be approved by the leadership of the California Department of Health Services before it can be released for public comment. There will be a public hearing on this draft at the end of the public comment period, which we hope will be in late June.

The guidelines will be used as the basis for a risk evaluation of the health effects of exposure to electric and magnetic fields, which will be conducted by the California Department of Health Services staff in the next 12 months. On March 17, 1999, the consultants for the School and Power Grid/Land Use Policy models will meet

with program staff to discuss ways to incorporate the values resulting from the risk assessment into these models in the future, as well as the need to standardize the terminology used in these projects. A detailed description of how the results of the risk evaluation will be used will then be added to the Risk Evaluation Guidelines.

Electric Power Reliability Meetings

In mid-February, program staff held meetings with the Independent Systems Operator (ISO), which oversees California's electrical transmission system, and with utility company representatives to discuss the data required to compare the performance of underground and overhead lines. By the end of March, the ISO promised to provide the program with analyses of reliability data for transmission lines and utility companies indicated that they would make similar data available on their distribution lines.

Issues of reliability are qualitatively different in transmission and distribution systems. The transmission system contains backup systems so the failure of a single line does not generally cause a customer outage. This redundancy is not possible in most distribution lines, so a distribution line outage usually causes customers to lose power. Despite the fact that transmission line failures rarely lead to customer outages, they reduce the redundancy of the system until the broken circuit is fixed, raising the probability of a customer outage if another problem occurs. When transmission circuit failures cause customer outages, the numbers affected are often much larger than would result from a distribution circuit failure. Another aspect of transmission line failures is that the length of a transmission circuit is not a good predictor of the probability of outages on the circuit because most failures are caused by transformers and other equipment, not the lines themselves. Detlof von Winterfeldt, who will perform this reliability analysis for the program, will build these concepts into his Power Grid Policy Model.

Cost and Engineering Review of EnerTech Report

In response to concerns about the cost estimates and assumptions about mitigation efficacy included in the EnerTech School Exposure Assessment report, the program is expanding its review of this document. Program staff will hire several electrical engineers with practical experience in powerline construction and an electrical contractor with practical experience with magnetic fields from indoor sources to comment on these aspects of the study. To help prepare these experts for the review, Detlof

von Winterfeldt will provide a package of relevant materials and he, Luciano Zaffanella of EnerTech, and representatives of Power Engineers will be available to answer questions during a conference call early in the review process.

Occupational Exposure Assessment Survey

EMF Program staff met with the project's principal investigator, Michael Yost, to discuss the progress and the goals of the task-oriented Occupational Exposure Assessment project in response to concerns raised at the February SAC meeting. The goal of this project, as clarified in this discussion, is for the contractor to develop a questionnaire that can distinguish workers with high and low time-weighted average exposures from job-related operator and areas sources. This will be done using published information on the magnetic field exposures related to tasks and sources encountered at work. One major issue in this discussion was the difficulty of separating task-related and environmental exposures.

The project team is attempting the first validation of the questionnaire on a sample of 70 Colorado utility workers in both electrical and non-electrical occupations. In this validation, survey measurement estimates will be evaluated against contemporaneous, work-related direct personal exposure measurements and area measurements that indicate environmental exposures. The questionnaire is also being modified in response to other comments received during the latest SAC meeting.

Brief Research Program Updates

- Dr. Luciano Zaffanella has agreed to prepare a summary of EnerTech's school survey. This will be done in conjunction with his preparation of a presentation of this study for the Bioelectromagnetics Society (BEMS) Meeting in June, and therefore will be at no additional cost to the program.
- The exposure data of the 1000 women participating in the Prospective Pregnancy Study have been forwarded to the project's principal investigator, Dr. De-Kun Li, for analysis. The analysis will be completed after the pregnancy outcomes of all women interviewed for the study are known.
- EMF Program staff are summarizing the completed transcripts of the Epidemiology Workshop discussion periods for inclusion in the workshop's Proceedings. BEMS has confirmed that it will publish these Proceedings as a special issue of its journal, *Bioelectromagnetics*. Unfortunately, since the Bioelectromagnetics Society could

not raise additional funds from other sources to cover publication costs, the EMF Program has been forced to increase its contribution towards the issue to \$22,000. This amount is still within the budget set aside for the workshop, which originally included funds for editing and printing the proceedings as an internal program report.

➤ Parkcenter Reality Advisors have completed their design proposal and cost estimate for a study evaluating the impact of overhead lines on real estate values. Their proposal responds to the mock Request for Proposal (RFP) prepared by Detlof von Winterfeldt as an element of the Power Grid/Land Use Policy Project. The first draft of Parkcenter's study design will be submitted to the SAC for comments.

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PROGRAM SCHEDULE (*dates tentative*)

April/May	School and Power Grid Policy Projects released for Stakeholder review Revised Risk Evaluation Guidelines released for public comment
May 24-26	Stakeholders Advisory Committee Meeting*
June 20-24	Bioelectromagnetics Society meeting in Long Beach, California
June 28-30	Stakeholders Advisory Committee Meeting* Public Hearing on Risk Evaluation Guidelines
October/November	Workshops on the School and Power Grid Policy Models
November 8-9	Stakeholders Advisory Committee meeting on policy project final drafts and preliminary ideas for policy integration

*This meeting will be held on the given dates in either May *or* June, *not both*.



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